



Doc Code: AP.PRE.REQ

PTO/SB/33 (07-05)

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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Docket Number (Optional)

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]

on 12/14/2006Signature Robert H. RocheTyped or printed name Robert H. Roche

Application Number

10/754,800

Filed

01/09/2004

First Named Inventor

Robert H. Roche

Art Unit

2612

Examiner

Mehmood, Jennifer A.

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the



applicant/inventor.



assignee of record of the entire interest.

See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/96)



attorney or agent of record.

Registration number \_\_\_\_\_



attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

Signature

Robert H. Roche

Typed or printed name

410-876-5676

Telephone number

12/14/2006

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

\*Total of 1 (one) forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Application/Control Number: 10/754,800. Art Unit: 2612.

Application No.: 10/754,800

Confirmation No.: 1600

Applicants: Robert H. Roche, Vadym Buyalsky, and Vladimir Herman

Filed: 01/09/2004. TC/A.U.: 2636

Supervisory Patent Examiner: Mr. Daniel Wu.

Examiner: Mrs. Mehmood, Jennifer A.

Customer No.: 7590. Docket No.: N/A.

Commissioner for Patents, Mail Stop AF, P.O. Box 1450, Alexandria, VA 22313-1450.

### **Arguments of Notice of Appeal and Pre-Appeal Brief Request for Review**

Dear Madam/Sir,

Find please attached hereto the form PTO/SB/31 (09-06) of Notice of Appeal, form PTO/SB/33 (07-05) of Pre-Appeal Brief Request for Review, and check of small entity CTRL Systems, Inc. # 2548 for \$250.00 made payable under 37 CFR § 1.23(a) and § 41.20(a) to Director of the U.S. Patent and Trademark Office.

This Notice of Appeal is being submitted to you under MPEP § 706.07 ( 37 CFR § 1.113 and § 1.116), since applicant doesn't agree with Claim rejections by Final Office Action of 09/20/2006.

We appreciate the efforts of Examiner in all the previous Office Actions devoted to placing the application No. 10/754,800 in condition for allowance. In response to the requirements of Examiner the applicant has made the necessary amendments to the Specification, Drawings and Claims according to the editorial notes and regarding the better explanation of subject matter of the invention with the aim to enable any person skilled in the art to which it pertains to utilize this invention successfully. Furthermore, these additional explanations represent the know-how of ultrasonic detection technology proprietary to CTRL Systems, Inc.

Nevertheless, the applicant needs to set forth under 37 CFR § 41.31(a)(1) the following arguments of its disagreement with the primary examiner's rejection of its claims by FINAL Office Action of 09/20/2006, namely:

1) The independent Claim 1 comprises the distinct statement of the patentable feature of invention under 35 U.S.C. 102 and 103, i.e. the method of improvement of the process of ultrasonic detection of a target where this improvement consists in sufficient enhancement of distance and trustworthiness of locating a target with ultrasound beam patterns. Besides, Claim 1 states limitations that represent the logical sequence of techniques the said method is being accomplished with. None of the US Patents and Applications that Examiner tried to oppose to the invention by application No.: 10/754,800 contain the similar limitations and their unusual interdependence.

2) The clear illustration of the method and techniques thereof is represented by figures in formats of drawings, tables and flow charts.

3) The independent Claim 1 and dependent Claims 2, 3, 4, 5, 6 state the basic breakdowns of projecting a defense-in-depth infrastructure of ultrasound intrusion detection system with use of the interrelated techniques of:

- Arrangement all the premises of buildings and outside dome-type room around a protected object in multi-echelon structure where the shape and dimensions of these juxtaposed echelons are limited by possible distance of propagation of ultrasound in the designed direction of intrusion location.
- Choice of types of ultrasonic detectors and their spacing chart in accordance with the format of intrusion detection and pertain mode of response of emitted ultrasound signal inside every echelon.
- Designing predictive models of intrusion vulnerability of each echelon and the entire area of protected object regarding previously simulated model of presumptive spatio-temporal behavior of an intruding subject or a trespasser along their possible routings; and plotting the intrusion event tree that reveals cause-effect relations between an intrusion occurrence and subsequent menaces, i.e. threats, to echelons and their sublevels therein, and to a protected object integrally.
- Derivation of mathematical expressions for the system of logical equations of said cause-effect relations for the intrusion events in every echelon and its sublevels therein, the verifying logical matrix of intrusion justification, the logical decision matrix of inter-echelon cause-effect relations and factors of menaces, the generalized resolving logical equation; and drawing up the control software algorithm that governs the hardware where the resolver handles the system of said echelons' logical equations, the verifying logical matrix, the logical decision matrix and the generalized resolving logical equation; the data control block operates the modes of locating with ultrasound beams and the data acquisition procedure; and the system control block forms and presents the signals of intrusion detection and justification, and the triggering signals of intrusion prevention, protection and defense.
- Establishing the software-programmable inter-echelon informational and processing logical-interrelation among all the juxtaposed and non-adjacent echelons wherein said interrelation is being automatically treated and handled in the real time domain by the said control software algorithm that operates the continuous status scan of all the ultrasonic

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detectors (transceivers and oppositely aligned pairs of transmitters and receivers) in every echelon simultaneously. The informational and processing inter-echelon interrelation is being treated by control software algorithm that features situational logic transition driven by IF-THEN operator.

4) The dependent Claims 9 and 10 state distinctly the limitations regarding the techniques of:

- Setting-up the echelons' logical equations, the logical decision matrix, the verifying logical matrix, and the generalized resolving logical equation.
- The iterative process of resolving the goal function of ultrasound intrusion detection during continuous status scan and data acquisition by the sequential procedure in the steps of:  
solution of the echelons' logical equations for justification the fact of intrusion menace; and carrying-out running analysis of acquired facts of intrusion menaces by logical decision matrix; and  
processing the generalized resolving logical equation by the said control software algorithm with respect to the said verifying logical matrix.

Since the invention by Application No.: 10/754,800 possesses patentability and features the novelty of ultrasound intrusion detection methodology, the Claims 1, 2, 3, 4, 5, 6, 9, and 10 amended under MPEP § 706.07 ( 37 CFR § 1.113; § 1.116) are expected not to be rejected due to the temporary misunderstanding of their specificities and distinctness.

Respectfully submitted, CTRL Systems, Inc.

By  Robert H. Roche

Date: 12/14/2006

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